



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Annual Meeting, Dec. 29, 1846.

VICE PRESIDENT WETHERILL in the Chair.

The Committee on the following communication by Dr. Leidy, reported in favor of publication.

On the situation of the Olfactory sense in the terrestrial tribe of the Gasteropodous Mollusca.

BY JOSEPH LEIDY, M. D.

While no observer of the habits of the terrestrial Gasteropoda doubts the existence of the sense of smell in them, but on the contrary, asserts positively that it does exist, the anatomist heretofore has not been able to point out its precise seat.

Swammerdam, in his *Biblia Natura*, speaks decidedly of the existence of this sense in the *Helix pomatia*, but offers no conjecture as to its situation. Blumenbach remarks, under the head of Vermes, "Several animals of this class appear to have the sense of smelling, as many land snails (*Helix pomatia*, &c.)," and afterwards adds, "But the organ of this sense is hitherto unknown; perhaps it may be the stigma thoracicum." Cuvier in his *Mémoire sur la Limace et le Colimaçon*, after remarking the delicacy of this sense, thinks it probable it may reside "Dans la peau toute entière, qui a beaucoup texture d'une membrane pituitaire."

In investigating the anatomy of this tribe of Gasteropodous Mollusca, I detected an organ which appeared to have been entirely neglected, or has escaped the notice of those who have dissected these animals. It is a depression or cul-de-sac, having its orifice beneath the mouth, between the inferior lip and the anterior extremity of the pedal disk, and which in many species of different genera is elongated backwards into a blind duct, more or less deep, occupying a situation just above the pedal disk, within the visceral cavity. In *Bulimus fasciatus* it extends backwards as far as the tail, and is several times folded upon itself; in *Glandina truncata* it extends the length of the pedal disk; in the various species of *Helix* it is found from a superficial depression to a sac the length of the pedal disk; in *Succinea obliqua* it is of considerable length; in *Limax* and *Arion* it is a superficial depression: in an undetermined species of *Vaginula*, hereafter to be described, I found it half an inch in length, &c.

It is composed of two laminæ; a delicate lining mucous membrane and an external layer, having a whitish or reddish glandular appearance. A large nerve, on each side, from the subœsophageal ganglia, is distributed to its commencement, besides which it receives numerous smaller branches along its course from the same ganglia. Its arterial supply is derived from the cephalic branch of the aorta.

This organ, from its situation, relative size to the degree of perfection of the olfactive sense, as in the carnivorous *Glandina truncata*, &c., its structure, and nervous supply, I think, is the olfactory organ.*

The Committee on Mr. Cassin's communication, read Nov. 17, 1846, reported in favor of publication.

Note on an Instinct probably possessed by the Herons, (ARDEA, Linn.)

BY JOHN CASSIN.

Several years since, I had an opportunity of observing the Great Heron (*Ardea Herodias*, Linn.) engaged in capturing fishes, and was much surprised at the singular facility with which he struck his prey beneath the surface of the water. This was done almost invariably by striking laterally and obliquely, very rarely vertically or nearly so, as fishes came within reach.

It appeared to me at that time, and more recent observations have tended to confirm the impression, that this bird, and others which procure food in the same manner, must possess an instinctive knowledge of refraction.

A moment's consideration is sufficient to warrant the inference that this knowledge, if possessed at all, must be instinctive and transmitted from parent to offspring; for it is obvious that if every young bird should be obliged to acquire it, his risk of starving during such apprenticeship would be imminent.

My observations have not been sufficiently extended to fully justify a conclusion, but I have little doubt that the opinion here expressed is correct,—my object, however, is more especially to ask attention to this remarkable and hitherto unnoticed subject.

The Monthly Report of the Corresponding Secretary was read and adopted.

The Annual Report of the Treasurer was read and referred to the Auditors.

The Annual Report of the Librarian was read and adopted.

* Since writing the above, I have had an opportunity, through the kindness of Mr. Cassin, of examining a specimen of *Helix pomatia*, from Europe, in which I find the organ in question existing as a funnel-shape depression beneath the mouth, and extending backwards along the pedal disk for the distance of three-fourths of an inch. This I consider particularly interesting, as the same species has been minutely dissected and described by Swammerdam, Cuvier, and others, without any reference whatever to this cul-de-sac.

The Society then went into an election for Officers for the year 1847. The following result was reported by the Tellers:

PRESIDENT.

William Hembel.

VICE PRESIDENTS.

J. Price Wetherill.

Samuel George Morton, M. D.

CORRESPONDING SECRETARY.

Walter R. Johnson.

RECORDING SECRETARY.

Theodore F. Moss.

LIBRARIAN.

Wm. S. Zantzinger, M. D.

TREASURER.

George W. Carpenter.

CURATORS.

Joseph Leidy, M. D.

William S. Vaux.

Samuel Ashmead.

John Cassin.

AUDITORS.

Robert Pearsall.

Wm. S. Vaux.

Robert Bridges, M. D.

COMMITTEE OF PUBLICATION.

Wm. S. Vaux.

Walter R. Johnson.

Thomas B. Wilson, M. D.

Samuel Ashmead.

William Gambel,

The following gentlemen were elected Correspondents of the Academy.

Charles Hamilton Smith, Esq., of London.

Thomas C. Eyton, Esq., do.

George Robert Gray, Esq., do.

Richard Kippist, Esq., do.

M. E. Prisse, of Paris.

The following Resolutions, offered by Dr. Bridges, were unanimously adopted.

Resolved, That the thanks of the Academy be presented to the late Recording Secretary, Dr. W. S. Zantzinger, for the ability and zeal with which he has performed the duties of that office for the past five years.

Resolved, That the thanks of the Society be presented to the late Librarian, Dr. Joseph Leidy, for the able and faithful manner in which he has fulfilled the duties of his office for the past year.